GOVERNMENT OF INDIA
PETROLEUM AND NATURAL GAS
LOK SABHA

STARRED QUESTION NO:219
ANSWERED ON:29.11.2007
ALTERNATIVES FOR PETROL AND DIESEL
Patel Shri Jivabhai Ambalal;Singh Deo Smt. Sangeeta Kumari

Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

(a) whether the Government has conducted any research for development of alternatives of petrol and diesel;

(b) if so, the details thereof alongwith the results thereof; and

(c) The amount incurred by the Government on such research works during the last three years?

Answer

MINISTER OF PETROLEUM & NATURAL GAS (SHRI MURLI DEORA)

(a) to (c) A statement is laid on the Table of the House.

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (c) OF LOK SABHA STARRED QUESTION NO. 219 TO BE ANSERED ON 29TH NOVEMBER, 2007 ASKED BY SMT. SANGEETA KUMARI SINGH DEO SHRI JIVABHAI AMBALAL PATEL, M.Ps REGARDING ALTERNATIVES FOR PETROL AND DIESEL.

(a) & (b): Yes, Sir. In an effort to supplement the consumption of petroleum products particularly for vehicular applications and also to curb emissions, research has been carried out by the Ministry of New & Renewable Energy(MNRE) to explore the possibility of utilizing alternatives for supplementing petrol and diesel. Bio-fuels namely, bio-ethanol and bio-diesel, hydrogen energy and battery operated vehicles have been identified as potential future alternatives to supplement petrol and diesel.
The efforts of these R&D projects on bio-fuels have resulted in development of optimized process conditions for production of bio-diesel from non-edible oils such as Jatropha curcas, Pongamia pinneta etc., design, fabrication and development of 200 litre capacity bio-reactor for production of bio-diesel and isolation of efficient strains of micro-organisms for production of alcohol from waste materials. Performance of diesel car engine using bio-diesel under actual field conditions has been tested.
The efforts of R&D carried out on hydrogen including fuel cells have led to development of hydrogen based motor cycles, three wheelers, small capacity engine gen-sets and also fuel cell based power packs, uninterrupted power supply systems and hybrid van. The MNRE has supported research for development of advanced batteries, super capacitors, and components of electric vehicles for reducing the cost and improving the performance of the electric vehicles for wider acceptability and use to leading R&D institutions. Field trials of an electric hybrid van rickshaw for rural transportation has been completed.

(c) The amount incurred by the Ministry of New & Renewable Energy on research works relating to bio-fuels, hydrogen energy and battery operated vehicles during the last three years is given in Annex.

Annex

The amount incurred by the Ministry of New & Renewable Energy on research works relating to bio-fuels, hydrogen energy and battery operated vehicles during the last three years from 2004-05 to 2006-07 are as under:

(Rs. In lakhs)

Programme	2004-05	2005-06	2006-07
Bio-fuels	12.00	36.00	68.37
Hydrogen Energy	250.00	124.00	344.00
Battery Operated Vehicles	6.00	9.75	7.18